

INFLUENCE OF PHYSICAL CONDITION IN TGLITTRE PERFORMANCE IN INDIVIDUALS WITH COPD

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Introduction: Chronic Obstructive Pulmonary Disease (COPD) is a multi-systemic disease with repercussions on the functional status of the individual with COPD. In order to assess the functional capacity in individuals with COPD and in particular to measure the results of pulmonary rehabilitation programs, the six minutes walking test (6MWT) has been a widely used test, but the walk reflects only a life daily activity (ADL). For a more representative assessment of functional status, based on a set of activities similar to ADL's, such as walking, sit-to-stand, up and down stairs and moving objects with their upper limbs, it was developed the AVD Glittre test (TGlittre). Research proves that the TGlittre is a valid and reliable tool for measuring functional status in patients with COPD, with a strong correlation with the distance in 6MWT. However, the correlation with other components of physical condition, as the dynamic balance and strength of upper and lower limbs, is not yet described.

Objectives: To analyze the relation between TGlittre performance and fitness condition (strength of the lower and upper limbs, dynamic balance and endurance cardiorespiratory) in individuals with COPD.

Methods: A cross sectional study was performed with a sample 12 individuals (7 men, median age of 69,50) with stable COPD, in pulmonary rehabilitation in AIR Care Centre®-Pulmonary Rehabilitation Center of Linde Healthcare. Participants were classified according to the combined evaluation of GOLD (3 subjects A, 4-B, 3-C e 2-D), depending on the future risk (exacerbation in the last year and frequency), the airflow limitation severity (FEV₁) and the presence and intensity of symptoms (breathlessness - Scale modified Medical Research Council (MMRC) or the COPD Assessment Test (CAT)). It was evaluated the time taken to perform the TGlittre, the time obtained in 8-Foot up-and-go test, the knee extension 1RM testing and the handgrip and the distance in the 6MWT.

Results: The TGlittre was not correlated with the knee extension 1RM testing, with the handgrip and with the 8-Foot up-and-go. It was found as expected a significant, strong negative correlation between TGlittre and 6MWT ($r_s = -0.602$; $p = 0.038$). Despite not being aim of the study, in this sample, there was no significant difference in performance in TGlittre and gender and there was a significant, strong and positive correlation between performance TGlittre and age ($r_s = 0.64$; $p = 0.026$).

Conclusions: In this sample, the TGlittre was not affected by the physical condition (muscle strength and dynamic balance) but only by age. The small sample is the main limitation of this study, thus reinforcing the need to continue the study. The local muscle endurance tests of upper and lower limbs should also be the subject of study, as they may reflect better the kind of muscle work used in TGlittre.

Key words: COPD. TGlittre. Pulmonary rehabilitation. Exercise intolerance. Functional capacity.